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MANAGING STORMWATER IN MASSACHUSETTS

What Is Stormwater?

Stormwater runoff is the water from rain and snow melt that flows across land. Pollutants that have been deposited on land are carried by runoff into nearby rivers, streams, lakes, ponds, wetlands, marine waters, and groundwater. This contaminated runoff significantly degrades water quality and aquatic habitat. Stormwater runoff also may increase flooding and erosion. Development increases stormwater runoff, which alters natural drainage features, increases flooding, and may reduce the groundwater recharge to support wetlands and maintain base flows in streams. Development also increases the concentration and types of pollutants that can be carried by runoff, including nutrients, solids, metals, salt, pathogens, pesticides, and hydrocarbons. In Massachusetts, stormwater runoff and discharges from stormwater drain pipes are the largest contributors to water quality problems in the Commonwealth's rivers, streams, and marine waters.

What's New with Stormwater Management in Massachusetts?

In response to environmental concerns and the need for a comprehensive and streamlined stormwater management program, the Department of Environmental Protection (DEP) in 1992 began to examine the development of a stormwater management program. The Massachusetts Coastal Zone Management Office (MCZM) simultaneously began a stormwater planning effort in response to federal legislation directed at state coastal programs. The two agencies joined forces in 1995 to move forward with efforts to improve water quality and established an external Stormwater Advisory Committee to assist in developing stormwater management standards and a strategy for their implementation. The Committee included representatives from environmental, consulting, legal, and development organizations statewide.

Through this effort, DEP and MCZM have launched a new approach to address stormwater impacts. The approach has several components:

- A policy, establishing uniform performance standards and coordinating the requirements of several regulatory programs;
- The Stormwater Handbook, to promote consistent implementation of the policy and performance standards;
- The Best Management Practices Manual, containing technical information about site planning and stormwater management techniques;
- Training, to assist agency staff, conservation commissions and other municipal officials, and consultants;
- Financial assistance, through loans and grants; and
- Phased implementation, from policy to regulatory revisions after an evaluation period of one to two years.

What Is the Goal of the New Stormwater Management Policy?

The goal of the Stormwater Management Policy is to improve water quality and address water quantity problems by the implementation of performance standards for stormwater management. The Stormwater Management Standards establish clear and consistent guidelines for stormwater management

in Massachusetts. The Standards are designed for use under multiple statutory and regulatory authorities of DEP, including the Wetlands Protection Act, as amended by the Rivers Protection Act, and the Clean Waters Act.

What Are the Stormwater Standards?

The Stormwater Management Standards apply to industrial, commercial, institutional, residential subdivision, and roadway projects, including site preparation, construction, redevelopment, and on-going operations. The nine new stormwater standards are:

1. No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

2. Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.

3. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post-development site should approximate the annual recharge from the pre-development or existing site conditions, based on soil types.

4. For new development, stormwater management systems must be designed to remove 80% of the average annual load (post-development conditions) of Total Suspended Solids (TSS). It is presumed that this standard is met when: (a) Suitable nonstructural practices for source control and pollution prevention are implemented; (b) Stormwater management best management practices (BMPs) are sized to capture the prescribed runoff volume; and (c) Stormwater management BMPs are maintained as designed.

5. Stormwater discharges from areas with higher potential pollutant loads require the use of specific stormwater management BMPs. The use of infiltration practices without pretreatment is prohibited.

6. Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas. Critical areas are Outstanding Resource Waters (ORWs), shellfish beds, swimming beaches, cold water fisheries, and recharge areas for public water supplies.

7. Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable. However, if it is not practicable to meet all the Standards, new (retrofitted or expanded) stormwater management systems must be designed to improve existing conditions.

8. Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities.

9. All stormwater management systems must have an operation and maintenance plan to ensure that systems function as designed.